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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,864	08/21/2003	Fang-Chen Cheng	29250-001062/US	6876

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HARNESS, DICKEY & PIERCE, P.L.C.  
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EXAMINER
ALPHONSE, FRITZ

ART UNIT	PAPER NUMBER
2133	

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/644,864

Applicant(s)

CHENG ET AL.

Examiner

Fritz Alphonse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 6, 13, 15, 16, 17, 19, 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Particularly as to independent claims 1, 13 and 19, it is not clear to what it meant by “an **affect** on data”.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mousley (US Pub. 2003/0100268) in view of Zhang (U.S. Pat. No. 6,999,432).

As to claims 1 and 13, Mousley (fig. 4) discloses a communication system comprising: detecting a state of received ACK/NACK feedback information for associated sent data based on at least one threshold (page 2 [0027-0030]), Mousley discloses a term representing an effect on data for one possible type of error in detecting a state of the received ACK/NACK feedback information (page 3 and [0030-0033]).

Moulsley differs from claim 1 in that he does not specifically teach an objective function. However, using an objective function is obvious and well known in the art, as evidenced by Zhang (col. 20, lines 44-48).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to improve upon the communication system, as disclosed by Zhang. Doing so would provide a technique for optimizing a system with several services having different QoS level requirements for multimedia delivery over a wireless network.

As to claims 2-5, Moulsley (fig. 4) discloses a method, wherein the possible type of error is missed detection of a NACK and, wherein the term represents a cost of an average number of total bits to be retransmitted if a NACK is missed in detection (see abstract and [0027-0028]).

As to claims 6-7, Moulsley (fig. 4) discloses a method, wherein the objective function includes a term representing an affect on data throughput if the state of the received ACK/NACK feedback information is correctly detected, and wherein the term includes a weight variable representing a cost of correct detection of the state of the received ACK/NACK feedback information (page 3 [0030-0033]).

As to claims 8-10, Moulsley (fig. 4) discloses a method, wherein the term includes a throughput variable representing average data throughput; the value of the throughput variable is based on a probability that the ACK/NACK information is detected to represent an ACK and, wherein a value of the throughput variable is based on a probability that the ACK/NACK information is detected to represent a NACK (see abstract and [0007; 0027-0028]).

As top claims 11-12, Mousley (fig. 4) discloses a method, wherein a value of the throughput variable is based on a probability that the ACK/NACK information is detected to represent an erasure (note the reset timer 406).

As to claims 14-17, Mousley discloses a method, wherein the possible type of error is missed detection of a NACK; and, wherein the threshold is further derived based on an affect on data throughput if the state of the received ACK/NACK feedback information is correctly detected (see [0010]).

As to claims 18 and 19, method claims 18 and 19 correspond to apparatus claims 13; therefore, they are analyzed as previously discussed in claim 13 above.

As to claims 20-21, Mousley (fig. 4) discloses a method, wherein the error type is missed detection of a NACK; and, wherein the objective function further accounts for an affect on data throughput if the state of the received ACK/NACK feedback information is correctly detected (page 3 and [0028-0029]).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

**or faxed to:** (703) 872-9306 for all formal communications.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (Receptionist).

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse, whose telephone number is (571) 272-3813. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert De Cady, can be reached at (571) 272-3819.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Fritz Alphonse

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May 11, 2006

  
**GUY LAMARRE**  
**PRIMARY EXAMINER**